

Vitamin C

THE MULTI FUNCTIONAL VITAMIN: IMPORTANT FOR IMMUNITY, WITH CANCER, COLDS, ALLERGIES

Vitamin C is also called ascorbic acid. Unlike most animals, humans cannot produce it themselves and therefore depends on external supply. Vitamin C is found in many fruits and vegetables, especially in bell peppers, broccoli, papaya, kiwi, strawberries and citrus fruit, but also in potatoes. Vitamin C is measured in milligrams.

Storage and processing of foods destroy a substantial portion of their natural vitamin C. Due to modern agricultural methods, the vitamin content in produce is generally lower than it used to be (see the reports of the US Department of Agriculture). Diet calculations show that consumption of vitamin C was many times higher in the stone age than today; at least seven times higher. That is why supplementation is almost inevitable nowadays to lead a healthy life.

Vitamin C fulfils **many important tasks** in the human body. It is an antioxidant, plays a role in the breakdown of cholesterol, the detoxification of the liver, supports the absorption of iron, takes part in the production of hormones and the synthesis of neurotransmitters, the collagen production (connective tissue), the control of histamine levels (allergies) and carnitine synthesis (decomposition of fat).

Vitamin C has been studied on many occasions and shows preventative or even curative effects in the case of many diseases. Vitamin C is the most important **antioxidant** of our bodies. Antioxidants neutralize free radicals and slow down the aging process of our bodies. There is a division of labor between Antioxidants. Vitamin C neutralizes the free radicals in aqueous parts in and around the cells, **vitamin E and carotinoids**, on the other hand, in the fatty parts of the cells, such as the cell membranes. Vitamin C supports and protects the other antioxidants by intercepting free radicals before they reach the fatty parts of the cells. That way it can reduce the usage of vitamin E and other antioxidants.

The **eye** needs large quantities of vitamin C. If too many free radicals form in the eye, the lens becomes cloudy: **cataract**. 10 studies with 80,000 participants have shown that clouding of the lens can be reduced by 40-50% through regular ingestion of vitamin C. When vitamin C was supplemented over the course of 10 years, the clouding of the lens could be reduced by as much as 83%! The concentration of vitamin C in the eye keeps increasing up to a daily intake of **1000mg** of vitamin C per day.

Vitamin C can promote the excretion of **heavy metals**, for example mercury and lead. Dental metals and environmental toxins, and most of all cigarettes can be sources of mercury and lead. 1000mg of vitamin C per day can reduce the blood lead levels of smokers by 81%. But **smokers** have a 40% lower vitamin C concentration in the blood!

Vitamin C works against **cancer**. Nitrates get into our bodies through drinking water and processed foods. Vitamin C prevents them from being turned into nitrosamines which are carcinogenic. A meta study on a number of different kinds of cancers revealed that vitamin C can reduce the incidence of cancer up to 50%. The incidence of breast cancer in women was also reduced by 21%! **Nobel Prize Laureate Linus Pauling** has conducted extensive studies about the use of vitamin C in patients with cancer and has claimed a prolongation of the median life span of five times for patient with terminal cancer. This is described in the book "Cancer and Vitamin C" by Linus Pauling.

Vitamin C **prolongs life**. A study from the year 2001 shows that mortality correlates with the vitamin C concentration in the blood. In a study with 11,000 participants, supplementation with 800mg vitamin C daily increased the average life expectancy by **5 years!**

In the event of first **cold symptoms**, one should immediately take vitamin C. But it only works at a high dosage! Six doses of 1000mg vitamin C taken at one hour intervals, thereafter at least 1000mg per day. This dosage reduced the symptoms by 85% as compared to the group that took only 1000mg of vitamin C daily.

Vitamin C strengthens **immunity**. Macrophages (white blood cells that ingest pathogens and toxins) destroy intruders with free radicals. To protect themselves, they contain 40 times more vitamin C than other cells. That is why the consumption of vitamin C increases sharply in the case of a cold. Especially in the case of **viral infections**, vitamin C is of great importance, as the research about HIV has revealed. But it also holds true for other viral infections.

Vitamin C helps with **allergies**. Vitamin C prevents the excretion of histamines and regulates their decomposition, without any side effects. Unlike with clinical antihistaminics, vitamin C does not fatigue, on the contrary. In studies, vitamin C has also been shown to be effective against **asthma**.

Vitamin C, as well as the B vitamins, contributes to the synthesis of neuro transmitters such as Noradrenalin and dopamine. For that reason, the consumption of these vitamins increases under stress. When supply is short, lack of energy, poor fat burn-up, attention deficit, testiness, **fatigue and depression** can ensue – in short, what is generally referred to as “burnout” or “chronic fatigue syndrome”.

Vitamin C takes part in the **formation of collagen fibers**. Therefore large amounts of vitamin C are always found in wounds. For the same reason, Dr. Matthias Rath claims that vitamin C can prevent **heart disease**: It strengthens the walls of the blood vessels and therefore prevents their calcification and fatty degeneration.

Lack of vitamin C can lead to insufficient **fat burn-up**. Vitamin C is involved in the production of carnitine which transports the fat into the burning ovens of the cells.

Diabetics and smokers need larger amounts of antioxidants. The increased blood sugar in diabetics forms sticky compounds with fats and proteins and cause the known consequential damage of diabetes. If there are many free radicals in the blood, as is usually the case in smokers and diabetics, even more of these compounds are created. That is why diabetics have a four times higher risk of heart attack and stroke, smoking diabetics even 20 times higher! Add to that the fact that vitamin C is not as well absorbed into the cells because the pathways are blocked by sugar molecules. 1000mg Vitamin C per day can reduce the formation of the above mentioned compounds by 1/3.

An acute **lack of vitamin C** leads to proneness to infection, fatigue, depression, lack of concentration, formation of wrinkles, allergies and asthma, poor wound healing. Long term deficiency are cataract of old age, cancer, low immunity, arthritis, proneness to bruising, varicose veins and hemorrhoids, and cardiovascular disease.

The following **risk groups** need more vitamin C: smokers, persons who undergo a lot of stress, sick people (especially diabetics, acute infections, surgery), people who take pharmaceutical drugs (including birth control pill), and people over the age of 65.

The US **recommended daily average** for vitamin C is at 60mg per day for a grown-up. The upper safe limit for regular consumption is at 2000mg daily. That means that negative effects have never been observed below that level. Linus Pauling has administered 10,000mg daily for terminal cancer patients. Nowadays, 25,000mg or even 100,000mg daily are administered intravenously in cancer therapy. The bowel tolerance limit for oral consumption is at around 10,000 to 15,000mg. At that level, vitamin C will cause diarrhea. Below that level, it can cause some flatulence. When taken at high oral dosages, not all vitamin C is absorbed, but Linus Pauling holds that vitamin C fulfils important functions in the intestines also.

An **overdose** of vitamin C can lead to sickness, flatulence, and diarrhea. Vitamin C can interact with anticoagulants (blood thinners) and weaken their effect. Since oxalic acid is a by product of vitamin C metabolism, it has been conjectured that supplementing vitamin C could lead to kidney stone formation. This could not be verified for healthy people, however. People with gout or a family history of kidney stone formation should however consult with a medical doctor before taking large doses of vitamin C.